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REMARKS / DISCUSSION OF ISSUES

Claims 1-11 and 13-21 are pending in the application. Claim 12 is cancelled and claims 13-21 are newly added.

The applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority documents, and for determining that the drawings are acceptable.

Claims are amended for non-statutory reasons: to correct one or more informalities, remove figure label numbers, and/or to replace European-style claim phraseology with American-style claim language. The applicants thank the Examiner for providing recommended corrections.

New dependent claims are added to at least partially restore the original range of claims that existed before multiple dependencies were removed in the preliminary amendment. No new matter is added.

The Examiner has determined that claim 6 would be allowable if rewritten in independent form, including all of the limitations of its parent claim(s); claim 6 is correspondingly amended herein. No new matter is added, and the scope of the claim is not narrowed.

The Office action rejects:

claims 1 and 4 under 35 U.S.C. 102(b) and claims 2-3, 5, and 7 under 35 U.S.C. 103(a) over Claverie et al. (USP 5,889,605, hereinafter Claverie). The applicants respectfully traverse these rejections.

Each of the independent claims 1 and 4 include the limitation that the operating mode is based on an AC component of the photodiode's output signal.

Claverie specifically teaches determining the operating mode of the photodiode based on the average signal level. Claverie teaches controlling the operating mode as a means of controlling the output current of the photodiode to

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avoid saturation of the amplifier that receives this current. Claverie's FIG. 3 specifically illustrates a DC current amplifier, and does not provide an AC coupling, except to purposely remove the AC component via the capacitor 12. As specifically illustrated in FIGs. 4 and 5, signal Pav is a constant (DC) signal level, and as specifically taught by Claverie:

> "the means for biasing the PIN photodiode are capable of applying two bias states to the PIN photodiode, a first bias state and a second bias state, the bias being automatically established in the first or in the second state depending on the average received light power; in the first state, corresponding to average received light powers below a threshold value P_h threshold, the photodiode is reverse-biased by the biasing means; in the second state, corresponding to average received light powers greater than the threshold value P_h threshold, the photodiode is forward-biased by the said biasing means, the average photodetection current delivered by the photodiode then being constant." (Claverie, column 3, line 65 through column 4, line 8.)

Because Claverie fails to teach or suggest each of the limitations of the applicants' claims, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 1 and 4 under 35 U.S.C. 102(b) and claims 2-3, 5, and 7 under 35 U.S.C. 103(a) over Claverie.

The Office action rejects claims 8-11 under 35 U.S.C. 102(b) over Urala (USP 4,805,236).

Claim 8, upon which claims 9-11 depend, claims a circuit arrangement that includes photodiodes arranged in series, and a controlled current source that provides a bias current to the photodiodes based on the AC component of the output signal.

Urala teaches detecting a DC component and an AC component of the output signal of the photodetector, but specifically teaches that the bias of the photodiode is based on the DC component:

> "In studying the operation of the circuit, it is first assumed that the detected dc component I_d has exceeded a predetermined threshold value. This threshold value corresponds to an optical power sufficiently above the sensitivity threshold of the receiver. Above the threshold value, the control block 32 effects a forward biasing of the attenuation diodes D_1 and D_2, and

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generates currents adjusting the dynamic resistance r of the diodes by multipying the detected dc components I_d by a value n." (Urala, column 3, lines 50-59.)

Because Urala specifically teaches controlling the bias based on whether the DC component is above a threshold value, and fails to teach or suggest controlling the bias current based on the AC component, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 8-11 under 35 U.S.C. 102(b) over Urala.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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